

LISTING OF CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

1-16. (Cancelled)

17. (New) A plant vector including a nucleotide sequence encoding an HIV Gag polypeptide, wherein the nucleotide sequence encoding the Gag polypeptide comprises a sequence having at least 90% sequence identity to SEQ ID NO: 1.

18. (New) A plant vector including a nucleotide sequence encoding an HIV Gag polypeptide, wherein the nucleotide sequence encoding the Gag polypeptide comprises a sequence having at least 90% sequence identity to SEQ ID NO: 2.

19. (New) A vector according to claim 17, which is a tobacco mosaic virus vector.

20. (New) A vector according to claim 17, which is an *Agrobacterium tumefaciens* containing a T-derived plasmid construct.

21. (new) A plant cell including a vector according to claim 17, wherein the nucleotide sequence is operably linked to control elements compatible with expression in the cell.

22. (New) A cell according to claim 21, which is a *N. benthamiana* plant cell.

23. (New) A method of producing an HIV-1 immunogenic protein or a related polypeptide which is assembled into a form of virus-like particles, the method comprising the steps of:

(a) introducing a plant vector system into a host plant cell, the vector or vector system including a nucleic acid sequence encoding the HIV-1 immunogenic protein or

related polypeptide derived by substitution, deletion and/or insertion of one or more nucleotides, and/or extension or truncation of one or both ends thereof, the nucleic acid sequence having at least 90% identity to SEQ ID NO:1 or SEQ ID NO:2;

- (b) causing expression of the nucleic acid sequence in the host cell; and
- (c) recovering the resulting HIV-1 immunogenic protein virus-like particles or related polypeptide virus-like particles produced within the host cell.

24. (New) A method according to claim 23, wherein the vector is a tobacco mosaic virus vector.

25. (New) A method according to claim 23, wherein the vector is an *Agrobacterium tumefaciens* containing a T-derived plasmid construct.

26. (New) A method according to claim 23, wherein the plant cell is a *N. benthamiana* plant cell.

27. (New) An HIV-1 protein or polypeptide that is produced according to the method of claim 23, and which is assembled into a form of virus-like particles.

28. (New) A protein or polypeptide according to claim 27, which is an HIV-1 Pr55 Gag protein.

29. (New) A vaccine for use in treatment or prophylaxis of HIV infection in a mammal, the vaccine including virus-like particles of proteins or polypeptides as described in claim 27.

30. (New) A vaccine according to claim 29, which induces an immunogenic response to the virus-like particles in a suitable susceptible host.

31. (New) A vaccine according to claim 29, which includes a pharmaceutical excipient and/or adjuvant, and a therapeutically effective amount of the virus-like particles.